AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

1-10. (Canceled)

11. (Currently Amended) A <u>computer-implemented</u> method comprising:

determining, by a <u>workload analyzer</u> computing system, whether a workload executed or being executed by a platform resembles a reference workload, ~~based at least in part on one or more performance events observed from monitoring the platform's execution of the workload; and~~, said determining comprising:

<u>correlating each of a plurality of observed performance values to each of a corresponding plurality of reference performance values of the reference workload to produce a correlation metric representing the degree of overall statistical correlation between the plurality of observed performance values and the plurality of reference performance values; and</u>

<u>determining that the workload resembles the reference workload if the correlation metric exceeds a pre-determined threshold;</u>

in response to determining that the workload resembles the reference workload, performing, by the <u>workload analyzer</u> computing system, a selected one of

selecting, by the <u>workload analyzer</u> computing system, a set of one or more configuration parameter values pre-selected for the platform to execute the resembled reference workload and configuring the <u>workload analyzer</u> computing system using the set of one or more configuration parameter values, and

providing, by the <u>workload analyzer</u> computing system, information about the determined resembled reference workload to facilitate the selection of the set of one or more configuration parameter values pre-selected for the platform to execute the determined resembled reference workload.

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12.   (Currently Amended) The <u>computer-implemented</u> method of claim 11, wherein the one or more reference workloads comprise at least a selected one of a route look-up workload, a OSPF workload, a JPEG codec workload, a 3DES encryption/decryption workload, an AES encryption/decryption workload, an IP packet forwarding workload, a H.323 speech codec workload.

13.   (Canceled)

14.   (Currently Amended) The <u>computer-implemented</u> method of claim 11, wherein the method further comprises performing a selected one of

      receiving <u>by the workload analyzer computing system,</u> the one or more

          performance events observed during said monitoring; and

      said monitoring <u>by the workload analyzer computing system</u>.

15.   (Currently Amended) The <u>computer-implemented</u> method of claim 11, wherein

      the system comprises the platform; and

      the method further comprises <u>the workload analyzer computing system</u> executing

          the workload, and performing said monitoring.

16.   (Currently Amended) The <u>computer-implemented</u> method of claim 11, wherein

      said performing comprises selecting a set of one or more configuration parameter values pre-selected for the platform to execute the determined resembled reference workload; and

      the method further comprises performing a selected one of

          applying<u>, by the workload analyzer computing system,</u> the selected set of one

             or more configuration parameter values to configure the platform, and

          providing<u>, by the workload analyzer computing system,</u> information about the

             selected set of one or more configuration parameter values to facilitate

             application of the selected set of one or more configuration parameter

             values to configure the platform.

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17.   (Currently Amended) A computer-implemented method comprising:

generating, by a workload analyzer computing system, a lookup index ~~to one or more pre-established sets of configuration parameter values,~~ based at least in part on an output of an index function configured to accept as input one or more measured performance values associated with one or more corresponding observed performance events ~~associated with~~resulting from a platform's execution of a workload; ~~and~~

selecting, by the workload analyzer computing system, one of ~~the~~a one or more pre-established sets of configuration parameter values, based at least in part on the generated lookup index, for application to configure the platform, each of the pre-established sets of configuration parameter values being associated with corresponding reference workloads, and each of the pre-established sets of configuration parameter values having been previously determined to result in a lowest number of processor cycles per unit of work when used to configure a reference platform while executing the corresponding reference workloads~~.~~; and

configuring the platform according to the selected pre-established set of configuration parameter values.

18.   (Canceled)

19.   (Currently Amended) The computer-implemented method of claim 17, wherein the method further comprises performing, by the workload analyzer computing system, a selected one of:

receiving the one or more performance events observed; and

monitoring said execution of the workload by the platform.

20.   (Currently Amended) The computer-implemented method of claim 17, wherein the method further comprises performing, by the workload analyzer computing system, a selected one of

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providing information about the selected set of one or more configuration

parameter values to facilitate application of the selected set of one or more

configuration parameter values to configure the platform; and

applying the selected set of one or more configuration parameter values to

configure the platform, the platform being a part of the <u>workload analyzer</u>

<u>computing</u> system.

21.   (Currently Amended) An apparatus comprising

storage medium having stored therein programming instructions designed to

enable the apparatus to

determine whether a workload executed or being executed by a platform

sufficiently resembles a reference workload, the workload comprising a plurality of

performance events observed from monitoring the platform's execution of the workload,

and the reference workload comprising a plurality of reference performance events

collectively characterizing a signature computational task<u>, the plurality of programming</u>

<u>instructions designed to enable the apparatus to determine whether the workload</u>

<u>resembles the reference workload having instructions to:</u>

   <u>correlate each of a plurality of observed performance values to each of a</u>

<u>corresponding plurality of reference performance values of the reference</u>

<u>workload to produce a correlation metric representing the degree of overall</u>

<u>statistical correlation between the plurality of observed performance values and</u>

<u>the plurality of reference performance values; and</u>

   <u>determine that the workload resembles the reference workload if the</u>

<u>correlation metric exceeds a pre-determined threshold,</u> and

upon determining that the workload sufficiently resembles the reference

workload, perform at least a selected one of<u>:</u>

   select<s>ing</s> a set of one or more configuration parameter values pre-

selected for the platform to execute the determined resembled

reference workload and reconfiguring the platform using the set of

one or more configuration parameter values, and

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provid<u>e</u>~~ing~~ information about the determined resembled reference workload to facilitate the selection of the set of one or more configuration parameter values pre-selected for the platform to execute the determined resembled reference workload; and

at least one processor coupled to the storage medium to execute the programming instructions.

22.   (Canceled)

23.   (Currently Amended) The apparatus of claim 21, wherein the programming instructions are further designed to <u>program the apparatus to </u>perform a selected one of

receiv<u>e</u>~~ing~~ the plurality of performance events observed during said monitoring;

monitor~~ing~~ the execution of the workload to observe the plurality of performance events;

provid<u>e</u>~~ing~~ information about the selected set of one or more configuration parameter values to facilitate application of the selected set of one or more configuration parameter values to configure the platform; and

apply~~ing~~ the selected set of one or more configuration parameter values to configure the platform.

24.   (Currently Amended) An apparatus comprising:

a storage medium having stored therein programming instructions designed to enable the apparatus to<u>:</u>

generate a lookup index to one or more pre-established sets of configuration parameter values, based at least in part on an output of an index function configured to accept as input one or more measured performance values associated with one or more corresponding observed performance events associated with a platform's execution of a workload<u>, each of the pre-established sets of configuration parameter values being associated with corresponding reference workloads, and each of the pre-established sets</u>

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of configuration parameter values having been previously determined to result in a lowest number of processor cycles per unit of work when used to configure a reference platform while executing the corresponding reference workloads; and

        select one of the one or more pre-established sets of configuration parameter values, based at least in part on the generated lookup index, for application to configure the platform; and

at least a processor coupled to the storage medium to execute the programming instructions.

25.   (Canceled)

26.   (Currently Amended) The apparatus of claim 24, wherein the programming instructions are further designed to enable the apparatus to perform a selected one of:

        receiv~~ing~~e the one or more performance events observed;

        monitor~~ing~~ said execution of the workload by the platform;

        provid~~ing~~e information about the selected set of one or more configuration parameter values to facilitate application of the selected set of one or more configuration parameter values to configure the platform; and

        apply~~ing~~ the selected set of one or more configuration parameter values to configure the platform, the platform being a part of the system.

27.   (Currently Amended) A system comprising:

        a platform to execute a workload ~~comprising~~ and to perform a plurality of performance events associated with the workload;

        a monitor, either coupled to or an integral part of the platform, to observe the plurality of performance events ~~of the workload~~; and

        an analyzer coupled to the monitor to receive the plurality of performance events observed, and in response, at least contribute to selecting if possible, a set of one or

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more configuration parameters values for application to configure the platform, based at least in part on the plurality of performance events observed,

wherein the analyzer is adapted to at least contribute by determining whether the workload resembles one of one or more reference workloads, the resembled reference workload having an associated plurality of reference performance events collectively characterizing a particular computational task, said determining comprising:

correlating each of a plurality of observed performance values to each of a corresponding plurality of reference performance values of the reference workload to produce a correlation metric representing the degree of overall statistical correlation between the plurality of observed performance values and the plurality of reference performance values; and

determining that the workload resembles the reference workload if the correlation metric exceeds a pre-determined threshold.

28. (Canceled)

29. (Canceled)

30. (Currently Amended) The system of claim 27, wherein:
the platform comprises a first networking interface; and
the system further comprises a computing device hosting the analyzer, the computing device including a second networking interface to couple the computing device with the platform via a network connection.

31. (Currently Amended) An article of manufacture comprising:
a machine readable medium; and
a plurality of programming instructions on the machine readable medium, designed to enable an apparatus to observe one or more performance events associated with a platform's execution of a workload or receive the one or more performance events observed, and to at least contribute in selection of one or more

configuration parameters values for application to configure the platform, based at least in part on the one or more performance events observed, wherein the <u>plurality of programming instructions are</u> at least ~~contributing includes the platform~~<u>designed to enable the apparatus to:</u>

determin<u>e</u>~~ing~~ whether the workload resembles one of one or more reference workloads, based at least in part on the received one or more performance events observed, the resembled reference workload to be employed to facilitate said selection of one or more configuration parameter values<u>, the plurality of programming instructions further designed to enable the apparatus to determine whether the workload resembles the reference workload having instructions to:</u>

<u>correlate each of a plurality of observed performance values to each of a corresponding plurality of reference performance values of the reference workload to produce a correlation metric representing the degree of overall statistical correlation between the plurality of observed performance values and the plurality of reference performance values; and</u>

<u>determine that the workload resembles the reference workload if the correlation metric exceeds a pre-determined threshold;</u> or

generat<u>e</u>~~ing~~ a lookup index to one or more pre-established sets of configuration parameter values based at least in part on the output of an index function configured to accept as input one or more measured performance values corresponding to the received observed one or more performance events, to facilitate said selection of one of the one or more pre-established sets of configuration parameter values<u>, each of the pre-established sets of configuration parameter values corresponding to one of the one or more reference workloads, and each of the pre-established sets of configuration parameter values having been previously determined to result in a lowest number of processor cycles per unit of work when used to configure a reference platform while executing the corresponding reference workloads.</u>

32-33. (Canceled)

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34. (Previously Presented) The method of claim 11, wherein said monitoring the platform's execution of the workload comprises monitoring at least a selected one of a processor performance counter, an OS performance counter, and a chipset performance counter, while the platform executes the workload.

35. (Previously Presented) The method of claim 11, wherein the plurality of configuration parameter values comprise one or more of processor configuration parameter values, OS configuration parameter values, and chipset configuration parameter values.

36. (Previously Presented) The method of claim 17, wherein said monitoring the platform's execution of the workload comprises monitoring at least a selected one of a processor performance counter, an OS performance counter, and a chipset performance counter, while the platform executes the workload.

37. (Previously Presented) The method of claim 17, wherein the one or more configuration parameter values comprise one or more of processor configuration parameter values, OS configuration parameter values, and chipset configuration parameter values.

38. (New) The method of claim 11 wherein the correlation metric is a ratio of:
a covariance of the plurality of observed performance events and the plurality of reference performance events, and
a product of standard deviations of the observed performance values and the reference performance values.